

AMENDMENT TO THE CLAIMS

Claims 1-15. (*Canceled*)

Claim 16. (*New*) A laminate comprising:

a sandwich structure comprising:

a core comprising a composite material, said composite material comprising fibers;

two layers of composite material, the core being positioned between the two layers, said composite material of said two layers comprising fibers;

at least a portion of the fibers of the core having a mechanical strength significantly lower than a mechanical strength of at least a portion of the fibers of at least one of the two layers.

Claim 17. (*New*) A laminate according to claim 16, wherein:

the laminate has a total thickness e less than or equal to 3 mm.

Claim 18. (*New*) A laminate according to claim 17, wherein:

the core has a thickness e_2 less than or equal to 2 mm.

Claim 19. (*New*) A laminate according to claim 16, wherein:

the core and both of the two layers comprise a polymer resin matrix constituted by a single product.

Claim 20. (*New*) A laminate according to claim 16, wherein:

the core has a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers being defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 5.$$

Claim 21. (*New*) A laminate according to claim 16, wherein:

the core has a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers being defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 4.$$

Claim 22. (*New*) A laminate according to claim 16, wherein:

the core has a thickness e_2 and the two layers have a total thickness $e_3 + e_4$, a ratio between the thickness of the core and the total thickness of the two layers being defined as follows:

$$e_2 / \frac{e_3 + e_4}{2} \leq 3.5.$$

Claim 23. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise textile fibers or textile micro-fibers.

Claim 24. (*New*) A laminate according to claim 23, wherein:

the fibers of the core comprise synthetic fibers.

Claim 25. (*New*) A laminate according to claim 24, wherein:

the synthetic fibers comprise a member selected from the group consisting of polyamide fibers, polyolefine fibers, polyester fibers, and polyesterimide fibers.

Claim 26. (*New*) A laminate according to claim 23, wherein:

the textile fibers comprise natural fibers.

Claim 27. (*New*) A laminate according to claim 26, wherein:

the natural fibers comprise a member selected from the group consisting of silk fibers, cotton fibers, linen fibers, jute fibers, and hemp fibers.

Claim 28. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise cellulose fibers.

Claim 29. (*New*) A laminate according to claim 23, wherein:

the fibers of the core comprise fibers oriented within the composite material of the core.

Claim 30. (*New*) A laminate according to claim 29, wherein:

the fibers of the core comprise woven fibers.

Claim 31. (*New*) A laminate according to claim 29, wherein:

the fibers of the core comprise non-woven fibers.

Claim 32. (*New*) A laminate according to claim 23, wherein:

the fibers of the core comprise fibers randomly situated within the composite material of the core.

Claim 33. (*New*) A laminate according to claim 16, wherein:

the fibers of at least one of the two layers comprise high performance fibers or high performance micro-fibers.

Claim 34. (*New*) A laminate according to claim 16, wherein:

the fibers of said at least one of the two layers comprise carbon fibers or carbon micro-fibers.

Claim 35. (*New*) A laminate according to claim 16, wherein:

the fibers of said at least one of the two layers comprise glass fibers or glass micro-fibers.

Claim 36. (*New*) A laminate according to claim 16, wherein:

the fibers of said at least one of the two layers comprise synthetic polymer fibers or synthetic polymer micro-fibers.

Claim 37. (*New*) A laminate according to claim 36, wherein:

the fibers of said at least one of the two layers comprise fibers made of a material comprising a member selected from the group consisting of polyolefine, oriented and stretched high-density polyethylene, polyamide, VECTRAN®, and SPECTRA®.

Claim 38. (*New*) A laminate according to claim 16, wherein:

the fibers of said at least one of the two layers comprise metallic fibers or metallic micro-fibers.

Claim 39. (*New*) A laminate according to claim 38, wherein:

the fibers of said at least one of said two layers comprise fibers made of a material comprising a member selected from the group consisting of aluminum, titanium, and boron.

Claim 40. (*New*) A laminate according to claim 18, wherein:

the fibers of said at least one of the layers comprise natural fibers or natural micro-fibers.

Claim 41. (*New*) A laminate according to claim 40, wherein:

the fibers of said at least one of said two layers comprise fibers made of silk.

Claim 42. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having a characteristic of rupture stress CR of less than or equal to 1,500 Mpa.

Claim 43. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having a characteristic of rupture stress CR of less than or equal to 1,000 Mpa.

Claim 44. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having a characteristic of rupture stress CR of less than or equal to 750 Mpa.

Claim 45. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having a modulus M in longitudinal traction of less than or equal to 50,000 Mpa.

Claim 46. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having a modulus M in longitudinal traction of less than or equal to 30,000 Mpa.

Claim 47. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having a modulus M in longitudinal traction of less than or equal to 20,000 Mpa.

Claim 48. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having an elongation at rupture AR in longitudinal traction of greater than or equal to 1.0%.

Claim 49. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having an elongation at rupture AR in longitudinal traction of greater than or equal to 1.5%.

Claim 50. (*New*) A laminate according to claim 16, wherein:

the fibers of the core comprise micro-fibers having an elongation at rupture AR in longitudinal traction of greater than or equal to 2.0%.

Claim 51. (*New*) A laminate according to claim 16, wherein:

the core comprises a plurality of superimposed plies of composite material.

Claim 52. (*New*) A laminate according to claim 16, wherein:

at least one of the two layers comprises a plurality of superimposed plies of composite material.

Claim 53. (*New*) A laminate according to claim 51, wherein:

at least one of the two layers comprises a plurality of superimposed plies of composite material.

Claim 54. (*New*) A laminate according to claim 16, wherein:

at least one of the two layers is transparent so that the core is visible, the core comprising decorating elements.

Claim 55. (*New*) A laminate according to claim 16, wherein:

the laminate has a tensile strength R in a bending test T_f relative to a specimen test piece made of a carbon fiber composite having the same shape and rigidity as those of the test pieces tested, such that R is greater than or equal to 50 N/mm.

Claim 56. (*New*) A laminate according to claim 16, wherein:

the laminate has a tensile strength R in a bending test T_f relative to a specimen test piece made of a carbon fiber composite having the same shape and rigidity as those of the test pieces tested, such that R is greater than or equal to 60 N/mm.

Claim 57. (*New*) A laminate according to claim 16, wherein:

the laminate has a tensile strength R in a bending test T_f relative to a specimen test piece made of a carbon fiber composite having the same shape and rigidity as those of the test pieces tested, such that R is greater than or equal to 70 N/mm.

Claim 58. (*Withdrawn*) A method of manufacturing a laminate according to claim 16, wherein:

the core comprises at least one ply;

each of the two layers comprise at least ply;

the core and at least the two layers are superimposed;

the plies of the core and each of the layers comprise plies of woven or non-woven micro-fibers, oriented or non-oriented micro-fibers, and fibers preimpregnated with resin or non-preimpregnated with resin.

Claim 59. (*Withdrawn*) A use of a laminate according to claim 16 for manufacturing sports articles.

Claim 60. (*Withdrawn*) A use of a laminate according to claim 59 for manufacturing a sports article comprising a member selected from the group consisting of roller skates, skis, snowboards, skateboards, golf club shafts, golf club heads, scooters, cycles, fishing rods, racquets, helmets, ski poles, backpack frames, or tent pegs.

Claim 61. (*Withdrawn*) A use of a laminate according to claim 16 for manufacturing sports boots.

Claim 62. (*Withdrawn*) A use of a laminate according to claim 61 for manufacturing uppers or bottom assemblies of sports boots.

Claim 63. (*Withdrawn*) A sports article comprising a member used in claim 60.

Claim 64. (*Withdrawn*) A sports article comprising a member used in claim 61.

Claim 65. (*Withdrawn*) A sports article comprising a member used in claim 62.

Claim 66. (*Withdrawn*) A use of a laminate according to claim 16 for obtaining a composite laminate layer.